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May 2020

ARMY COMMUNICATOR

Voice of the Signal Regiment

Developing Skills for the Future of the Force

Plus:

- ***Covid-19***
- ***Know Your Tech***
- ***Signal History***

FROM THE CIVIL WAR TO WINNING IN THE ERA OF GREAT POWER COMPETITION
U.S. ARMY SIGNAL CORPS
1860 - 2020
160 YEARS OF EXCELLENCE

Contents

The Army Communicator is published as a command information e-publication for the men and women of the United States Army Signal Corps under the provisions of AR 360-1.

Opinions expressed herein do not necessarily reflect the views of Office, Chief of Signal, the US Army or the Department of Defense.

Submit articles, photos, graphics, videos, story ideas, and nominations for "Signal Spotlight" to the editor here. For additional information, please call (706) 791-7384.
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BG Christopher L. Eubank
Chief of Signal

CSM Richard D. Knott
Signal Corps Command Sergeant Major

CW5 Garth R. Hahn
Signal Corps Chief Warrant Officer

Nicholas M. Spinelli
Editor-in-Chief

On the Cover

A Satellite Communication Systems Operator-Maintainer helps install camouflage netting around their area of operations. The Signal Regiment provides training opportunities for Officers, Warrant Officers, and Enlisted Soldiers these and other valuable skills necessary for developing the Force of the Future
Photo by Sgt. 1st Class Kelvin Ringold

Chief of Signal Regimental Team

It is finally May and we are glad to be back with another edition of the Communicator. Our primary focus for this month is to continue to keep our Soldiers safe, healthy, and engaged. Army readiness is still a top priority through this pandemic so training must go on. Classes have been split up to reduce the amount of students in one room, distributed learning in a virtual environment has been implemented where possible, and Soldiers are wearing masks if they cannot maintain at least six feet of distance. This situation is not ideal, but we are committed to fully supporting the national efforts to stop the spread of COVID-19 while maintaining our readiness to defend the nation. While Soldiers here on Fort Gordon are still training, there are many Signal Soldiers who are teleworking or may be on administrative leave. Many of our Soldiers have become stay-at-home parents and even teachers. There is no question this pandemic has created a new, temporary "normal" for most of us but I hope you all are making the most of this time and reconnecting with yourself and family members. There is no better time to learn a new skill, find a new hobby, or read a new book. A few good books I would recommend are:

-*The Speed of Trust: The One Thing That Changed Everything* by Stephen M. R. Covey
-*Ghost Fleet* by August Cole and P.W. Singer
-*Call Sign Chaos: Learning to Lead* by Bing West and James N. Mattis
-*Team of Teams* by Gen. McChrystal
-*Getting the Message Through: A Branch History of the U.S. Army Signal Corps* by Rebecca Robbins Raines

During this time it is important for all of us to stay connected and engaged. Take time to learn all the opportunities the Signal Corps has for you. Make a plan for where you want your career to go and how to get there. At the end of this fight with COVID-19, opportunities such as Training with Industry and Advanced Civil Schooling will still be available. If any of our broadening opportunities interest you, ensure you stay up-to-date with application deadlines and requirements. This edition of the Communicator will help give you some base knowledge on everything we offer. Take advantage and control your career. Stay healthy, stay motivated, Signal Strong!

BG Christopher Eubank
Chief of Signal

CSM Richard Knott
Regimental CSM

CW5 Garth Hahn
Regimental CWO

Training the Trainers on High Frequency

Sgt. 1st Class Nicholas D. Hennessey
Training With Industry

Certifying on the AN/PRC-150(c) High Frequency (HF) radio was not as simple as I had anticipated. I have been a communications Soldier in the United States Army for over 18 years and have worked with the HF radio in several units ranging from Combat Engineers, Infantry, and Air Defense Artillery. I was able to execute HF communications across three states in upwards of 500 miles. I thought for sure that I knew this system as well as anyone and I could not have been more wrong. Assigned to L3Harris, under the Training with Industry (TWI) program, allowed for me to sit in on classes for the HF radio which, are taught by instructors with 10 plus years of experience with L3Harris and various military backgrounds. Instructors' backgrounds include former Army Special Forces 18E Communicators, Marine RECON Communicators, Army Communication Chiefs, Spectrum Managers, and Amateur Radio enthusiasts. The amount of knowledge and practical application of the HF radio system equated to well over 100 years of experience. The knowledge and wealth of experience from these leaders was endless, making the decision to learn this radio in a time of needing beyond line-of-sight (BLOS) communications throughout the Army was a no-brainer.

Sitting in the basic operator class made me realize that I did not know the radio as well as I had originally thought, nor did I know the reason why the configurations chosen were necessary. The class wasn't about policy, procedures, or unit specifications, but the why and reason behind each selection made within the radio options. At this point I realized that we as communicators are not being taught the proper way to deploy this system and I wanted to learn how. It all started with going back to the basics.

I reached out and was able to obtain the latest technical manual (TM) and begin reading it to understand the material and take notes on questions I had throughout my studies. I can easily say that I have read the manual at least a dozen times and referenced the manual countless times. Upon reading and understanding the system better, I was able to obtain the exportable version of the HF radio, the 5800M. It is the HF radio without the CRYPTO card. I needed this to be able to store the radios is my office, allowing me to practice manually inputting the information to the radio. After several weeks of hand-programming the radio, I felt proficient enough to be able to do it instinctively. At this point, my supervisor was convinced enough to want to do something that has not been done at L3Harris before, certify an active duty member to instruct the HF radio using the L3Harris name. This is when the real studying and practical exercises increased significantly.

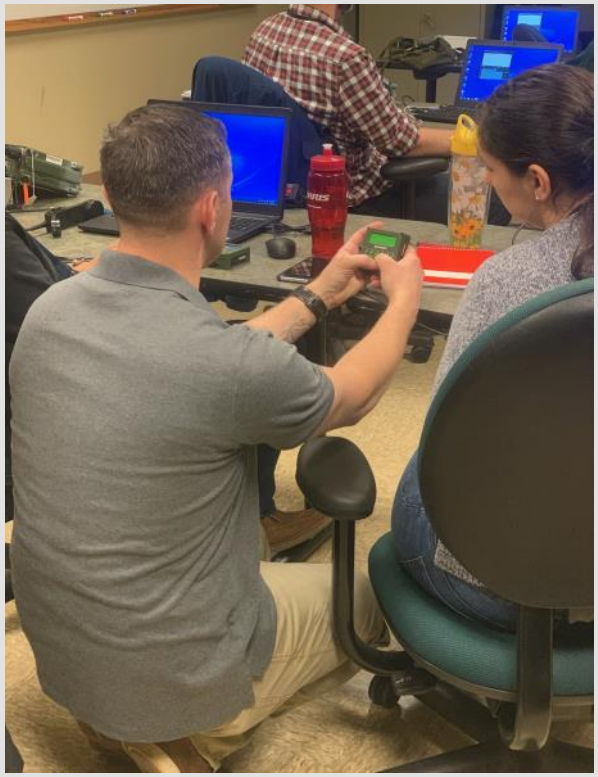
Teaming up with various in-

The L3Harris AN/PRC-150(c) High Frequency (HF) radio. Courtesy photo from harris.com

structors, pitching modules, further research methods, and several more hours of reading the TM, I was on my way to learning the radio as the instructors at L3Harris know them. Long days of reciting the same modules, watching Amateur radio videos, using LandWarNet resources and finally the information started to make sense. I created additional explanation slides to reinforce topics to aid myself in instruction and to provide additional clarification on various topics. The instructors started to gain confidence in my knowledge and willingness to teach at this point. Four months have passed and now I was finally allowed to instruct the 40-hour class on basic radio operations as the lead instructor.

The class included members of the multimedia team and publications department. The course content included: HF Propagation and Theory, Basic Radio Overview, FIX, ALE, 3G, 3G+, Frequency Hopping, Low Probability of Intercept / Low Probability of Detection (LPI/LPD), Communication Planning Application (CPA) overview, TAC CHAT, TAC CHAT IP, Wireless Message Terminal (WMT), and maintenance. I was able to include the topics of LPI/LPD and WMT to the L3Harris employees because they have access to the material. Only items purchased and cleared to the "buyers" can be instructed. I was able to instruct on all aspects of the radio and its operations to gain the full experience instead of the bits and pieces. Throughout the course, I had an instructor from L3Harris assigned to me as an evaluator and assistant instructor. I will say that he made it more stressful, but provided me constant feedback to improve my instruction processes and provided additional clarification if necessary. The course ended with my evaluation on specific topics outlined for all instructors which is on a 3-point scale. A 2.4 was required to be certified and I was given a 2.8 which now certifies me to teach the HF radio.

The whole process started roughly in November of 2019 and with mentorship from the L3Harris instructors, progressed through February 2020 when management was confident in my ability to teach a full block of instruction on my own. It is by no means an easy process nor one that I would be comfortable to say could happen in a shorter amount of time. The why and how of the radio and how the course progresses was more in-depth then I could have ever imagined. The information and expertise provided to me while going through this process could only being obtained from being part of such a rare opportunity working with the subject matter experts at L3Harris. In conclusion, this experience has led me to the belief that the instructors at the L3Harris training center are more than willing to teach fellow NCO's thus resulting in a more knowledgeable NCO corps leading the dissemination of information on practical application of L3Harris tactical radios.



L3Harris provided TWI fellows with training on HF Radio Instruction.
Photo provided by Sgt. 1st Class Nicholas D. Hennessey

TWI Fellows learn Best Business Practices on Cloud environments

CW3 Phillip A. Dieppa
Cyber Center of Excellence

I had the distinct pleasure of participating in the Training with Industry (TWI) program from 2018 to 2019. I was assigned to Microsoft with duty at their corporate headquarters in Redmond, Washington. They have a renowned Military Affairs staff that is led by Marine Corps Maj. Gen. (Ret) Chris Cortez. I was nearly overwhelmed with the endless opportunities that were available when I arrived. The military affairs section ensured that I was placed in a department that aligned with my interests, skillset, and training plan.

Projecting follow-on utilization assignments is a top priority for the program. This strategy is important because it allows the participant to develop an individual training plan which aligns with the organizational requirements for their next assignment. The fellows that are accepted into TWI must maximize the use of their time by understanding these two critical pieces of information. I was selected as an instructor at the Cyber Center of Excellence (CCOE) at Fort Gordon, Georgia. I was expected to teach the Warrant Officer Basic Course for the Military Occupational Specialty 255A, Information Systems Technician. Additionally, the CCOE was in the process of testing a Microsoft Azure cloud environment. They wanted to experiment with the platform to determine if it met requirements for hosting various virtual learning environments.

Courtesy graphic

I have a rather unusual skillset and background within the Signal Warrant Officer community. I earned two degrees in Computer Science, totaling to 6 years of collegiate programming experience. I've been developing software and building application programming interfaces (API) since 2004. I contributed to the "Apps for the Army" initiative at the US Army Signal School in 2008. I also had several apps that were published into the App Store for the iOS platform between 2007 and 2011. More recently, in 2017, I developed several dashboards in USAREUR by using business intelligence (BI) tools. I made it possible for Commanders to operationalize and visualize cybersecurity data. I wanted to create a training plan that was tailored to my specific skillset and experience. I also wanted to ensure the experience aligned with my interests and next assignment at the CCOE. I developed a training plan in coordination with the US Signal School proponent that ensured I received training in the following areas: Azure, Data Science, Development Operations (DEVOPS) and plenty of Programming.

I was impressed by the number of requests I received to join various teams within the company. I decided to work with the Windows Defender Site Reliability Engineering (SRE) and Threat Intelligence (TI) teams.

Courtesy graphic

The SRE team offered Azure, Business Intelligence, DEVOPS, and programming experience. The TI team offered Azure, Data Science, DEVOPS, and a small amount of programming experience.

I thoroughly enjoyed my time on both the SRE and TI teams. I gained an enormous amount of experience with Azure, DEVOPS, PowerShell, Programming, and business intelligence. I felt like I achieved my training plan goals and I knew that I could take many of the lessons I learned within industry back into the Army.

I immediately got to work when I arrived at the CCOE. I quickly assessed the Azure cloud environment when I was onboarded. I noticed that there were many items that could be optimized based on my experiences at Microsoft. I also wanted to transform the CCOE into an agile and robust cloud-integrated environment.

I gained a tremendous amount of experience with Azure DEVOPS at Microsoft. Azure DEVOPS is a tool used within the Azure environment to assist developers with integrating their code into various environments. I completely redesigned the Signal Leader Development College's (SLDC) virtual classroom deployment strategy. I built a collaborative, source-controlled repository using Git. The SLDC used a code-first approach when deploying classrooms, so I redesigned the code templates to be more flexible and added them into the repository. The repository can be checked out by other developers where they can update their environments and check-in the changes. Once the changes are checked in, they can be shared to everyone who has access to the repository. Additionally, I developed continuous integration pipelines that ensure every location that depends on the new updates, receive those updates. This saves the organization a lot of time and money when updating code and allows for agile development methodology. Features can be built, tested, and deployed within hours and distributed to everyone quickly for maximum efficiency.

I learned how the SLDC was monitoring its resources within Azure and found room for improvement. During TWI, I learned how to optimize resources within Azure by leveraging the tagging features that are applied to every item. I implemented a tagging system that allows the organization to do many things that were previously impossible. For example, the organization can now project costs for resources based on any number of tags. They can project costs

Courtesy graphic

based on the type of course and the class being taught. They can project cost based on instructor. They can project cost based on resource type and any combination of the aforementioned properties. The new tagging system led to a daily reduction in costs by about 40 percent by exposing newly created data and being able to operationalize the data.

The Army no longer trains programmers, but we still exist within the Army. I found a great opportunity within the CCOE's Azure environment to develop a web application that was modeled after one of Windows Defender's internal applications. The cloud environment had all the tools necessary to begin developing the project. I gathered requirements from the staff within the CCOE and built a program that automates processes within Azure to massively reduce operating costs. The web application is accessible to all of the instructors via Azure Active Directory that is driven by Smart Card authentication. The application is responsible for a total reduction in operating costs of about 45%. I would not have been able to build, deploy, and test the web application without the experience I gained at Microsoft. The web application is also integrated into a DEVOPS pipelines where changes can be monitored and deployed with confidence. Features can also be developed within hours and deployed within minutes using many features available within Azure.

I built a foundational knowledge of how Azure works while at Microsoft. I was a crucial member of the team because I brought an immense amount of Windows Server and service-oriented experience. Additionally, my computer science background enabled me to gain a deep understanding of PowerShell and how to interact with vast amounts of resources in Azure at a large scale. I became a premier member of the team by being able to quickly produce production-level PowerShell scripts that affected thousands of resources within Azure. The skills I learned while on the SRE team directly translated to the CCOE where I inherited Azure administrator roles. I was able to quickly develop scripts that efficiently made changes to many resources within Azure with confidence

and precision. Additionally, I was able to optimize existing scripts by converting them to more up-to-date and secure versions that reflect current Microsoft practices.

I would be remiss not to mention the other high-quality Warrant Officers that also participated in the TWI program at the CCOE. My contributions at the CCOE would not have been possible if they did not also leverage their experiences from TWI. The knowledge and performance of these Warrant Officers remain a perfect example in the quality of the program. They are certainly the top performers in their field and continue to be innovative and successful. Our team consists of at least 5 Warrant Officer alumni that participated at various TWI locations. The only reason I was able to walk into the CCOE and immediately be productive within their Azure environment was because of the work they did to get the environment established.

I gained valuable insights and practices that I continue to employ whenever possible. My exposure as an instructor at the CCOE also means that I get to share these experiences with junior Warrant Officers. I am able to encourage our new Warrant Officers to experiment with the latest technology as well as give advice on how to employ it within their organizations. The CCOE has already seen massive reduction in costs, despite the increased workload induced by the COVID-19 lockdown. Additional metadata added onto resources also means better business decisions within the Cloud environment for future iterations. I cherish the time I spent with Microsoft and I'm grateful to be able to make such impactful changes at the CCOE.

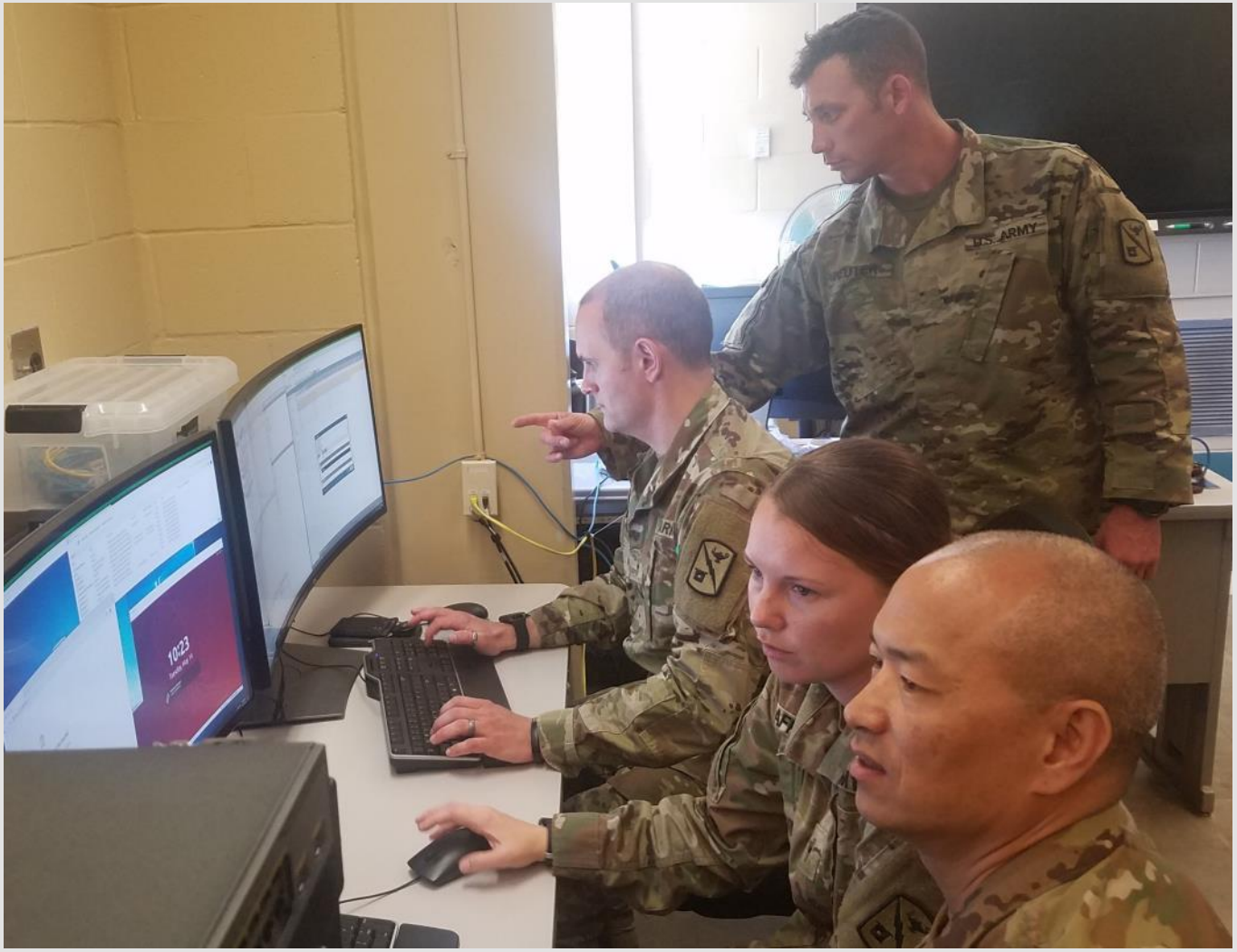
Advice from the "Calm Room" in Microsoft Headquaters.
Photo by CW3 Phillip Dieppa.

Cybersecurity Academy teaches next generation skills

CW3 James D. Goodrich
US Army Signal School

Managing the tactical network is the bread and butter of the Net-Tech. It is critical to enabling mission command at Brigade and below. As an OC/T at the National Training Center from 2015-2017 I saw firsthand how the Army's Heavy Brigades used three firewall technologies with varying degrees of effectiveness as a part of the comprehensive toolset used in the defense of the tactical network against the 1st IO Command's World Class Cyber OPFOR. The Palo Alto Networks Next Generation Firewall (aka "The Palo Alto") out-paced the other. As my rotations went on, the number of units that were fielded the Palo Alto were beginning to outnumber the units that had other firewalls. I'll share two observations: First, The Palo Alto is a very effective tool that was very useful to gain insight into network traffic and protect mission critical infrastructure. Second, even though no one came to NTC with institutional Palo Alto training, they quickly became effective with it after a few days use.

When I was assigned to the US Army Signal School in 2018, I was able to help us catch up with the firewall technology that was already in the field. I set out on



Students at the US Army Signal School Warrant Officer Basic Course.
Photo by CW3 James D. Goodrich.

a journey to get our 255N Warrant Officer Basic Course updated from teaching legacy firewall to using the latest Palo Alto Networks Training available.

The one year anniversary of the Palo Alto Networks Cybersecurity Academy partnership agreement with the US Army Signal School at Fort Gordon, Ga was this past march; and this partnership formalized our membership in the Palo Alto Networks Cybersecurity Academy Program, which was the first in the Department of Defense. The program avails us to quite a few resources, including instructor training, access to curriculum and support for our firewall labs. To date we have trained 60 255Ns at the US Army Signal School, with efforts underway to include our Information Protection Technicians (255S) and Telecommunications Engineers (FA-26A) as well.

The demand for this effort to take place was there, and the training needed to follow to prepare our network technicians in the field to work with the firewall.

As the Army continues to modernize the network and deploy nodes at progressively lower echelons to support its mission command needs it is paramount that the institutional domain stay relevant and keep training material up to date with the equipment we have in the field.

For the technicians who are in the field thinking “Great, they teach it at WOBC now, how does that help me?” There are a couple of things that you should know about.

The US Army Signal School Regional Signal Training Sites (RSTS, formerly known as Signal Universities), can offer Palo Alto Networks Training by request at an installation near you. Palo Alto Networks training was conducted under RSTS in 2019.

CW3 James D. Goodrich leading instruction. Courtesy photo.

Also, Palo Alto Networks offers digital learning for free on their publicly available website. All you have to do is register to get access to online training videos. While not quite as good as an instructor led class, these contain the information needed to become familiar with the tools available to you.

Lastly, if you qualify as a Veteran, Palo Alto Networks has another program that is geared toward getting Veterans hands-on skills in order to place in cybersecurity careers.
http://education.paloaltonetworks.com/learningcenter
https://live.paloaltonetworks.com/t5/Second-Watch/ct-p/Veterans_Network
https://lwn.army.mil/web/rsts (Common Access Card Required)

Signaleers help Warfighters communicate in Europe

Sgt. 1st Class Kelvin Ringold
40th Expeditionary Signal Battalion

Signaleers from Company A, 40th ESB, 11th Signal Brigade, deployed this past fall to Europe in support of the U.S. European Command.

With many critical missions on the horizon during the ramp-up for DEFENDER-Europe 20, the “Assassins” provided tactical communications systems support across Europe through joint network node (JNN) and command post node (CPN) teams.

Lima, Ohio native and Nodal Network Systems Operator-Maintainer, Staff Sgt. Jake Porter, is the noncommissioned officer-in-charge of JNN team 14. While Parker, Arizona native, Sgt. Saul Diaz, is the NCOIC of the four Soldier CPN team 64146.

Both teams scheduled for a nine-month rotation in Europe, the JNN team’s first mission was to conduct a validation exercise with 44th Expeditionary Signal Battalion.

Cpl. Rodneys Soares, Company A, 40th Expeditionary Signal Battalion, helps run Secret and Non-classified Internet Protocol Router Network lines in the Headquarters and Headquarters Company, 13th Expeditionary Sustainment Command, joint operations area.
Photo by Sgt. 1st Class Kelvin Ringold

“We completed our validation exercise a week after arriving in country and set the new record for validation with a time of 37 minutes,” Porter said.

Diaz and his CPN team successfully supported the 709th Military Police Battalion in Ansbach, Germany during their first mission, and Diaz was proud of what his team was able to do.

“These great Soldiers were able to further their knowledge on assemblages during the mission,” Diaz said. “Ensuring they would have the needed skills to be successful for any possible missions in their future.”

The JNN team then went to Hohenfels, Germany and supported the 1st Infantry Division during the exercise, Dragoon Ready.

Next, both teams travelled to Bydgoszcz, Poland towards the end of January to support Headquarters and Headquarters Company, 13th Expeditionary Sustainment Command for DEFENDER-Europe 20.

The 13th ESC was tasked to provide mission command of sustainment operations around Europe during the exercise, and the Assassins would be crucial in 13th ESC's ability to establish their tactical operations center.

"40th ESB's Soldiers established steadfast network connectivity using Warfighter Information Network Tactical systems," said Capt. Rosita Luapene, the 13th ESC Knowledge Management OIC. "Their expertise and exceptional skills were invaluable in providing around-the-clock, reliable communications for our TOC and joint operating area."

Although real-world events modified the exercise, the Assassins were able to solidify why 11th Sig. Bde. is regarded as, "the Army's premier unified land operations signal brigade."

The JNN team's, Cpl. Rodney Soares, was the team chief for the transmissions systems on the and was able to use his five years' worth of expertise to guide his fellow Soldiers.

"I was looking forward to the amount of training I could provide my fellow Soldiers and the knowledge I could hand down to them," Soares said. "I enjoy teaching about my profession in communications. Everything I learned since the first day in the Army has helped me be prepared for this mission and for any other task given to me."

The Assassin's Spc. Andrew Aue, has been in the Army for two and a half years, and learned a lot more on his satellite communication systems military occupational specialty, but also about deploying.

"I got to experience what it was like to be away from my Family, friends and everyday conveniences," Aue said.

Spc. Andrew Aue, 40th Expeditionary Signal Battalion, helps set-up a Phoenix ground satellite terminal Feb. 13. Stationed at Fort Huachuca, Arizona, the signaleers of 40th ESB will help the 13th Expeditionary Sustainment Command during DEFENDER-Europe 20.

Photo by Sgt. 1st Class Kelvin Ringold

Signal Soldiers respond to COVID-19

Staff Sgt. Joseph Truckley
Fort Stewart Public Affairs

Soldiers with the 63rd Expeditionary Signal Battalion, 35th Signal Brigade prepare equipment and personnel at Fort Stewart, Georgia, March 27, 2020 as they get the call to support U.S. Army North (Fifth Army) in the COVID-19 pandemic response.

Every mission requires communication to be successful, and Soldiers with the 63rd ESB are providing that critical support to the whole-of-government COVID-19 response.

According to the 63rd ESB commander, Lt. Col. John Sanders, Soldiers of the 63rd ESB are supporting U.S. Army North (Fifth Army) in response to the COVID-19 pandemic by providing reliable communications for medical units, logistical units and headquarters staff.

The missions 63rd ESB are in support of are part of Defense Support of Civilian Authorities (DSCA). Teams are actively

Soldiers with the 63rd Expeditionary Signal Battalion prepare their equipment to deploy in support of U.S. Northern Command and U.S. Army North's request for defense support of civil authorities in response to the COVID-19 pandemic March 27, 2020 at Fort Stewart, Ga.
Photo by Spc. Jason Greaves

providing support to medical units at the Jacob Javits Center in New York City and have postured at Joint-Base McGuire-Dix near Lakehurst, New Jersey as well as in Anderson, South Carolina for follow-on missions.

The battalion has the capabilities to provide 30 teams in response to emergency relief efforts pertaining to COVID-19, said Sanders.

“Bravo Company is assisting with 12 teams ready to respond to requests for communication support,” said Capt. AJ Mangosing, Bravo Company commander. “Our Soldiers are motivated, trained and ready.”

Teams left Fort Stewart by means of line haul operations. Soldiers staged their vehicles in the motor pool and convoyed north to support the areas of operations in New Jersey and South Carolina.

“We used line haul operations to minimize the risk of our Soldiers being exposed to COVID-19,” said Sanders.

“It is our duty and honor to respond when our nation calls,” Mangosing said.

Communication is key to any mission and Soldiers from the 63rd Expeditionary Signal Battalion are supporting U. S. Army North (Fifth Army)in response to the COVID-19 pandemic by providing reliable communications for medical units, logistical units, and headquarters staff. These missions are part of Defense Support of Civilian Authorities (DSCA). Teams are actively providing support to medical units at the Jacob Javits center in New York City and have postured at Joint-Base McGuire-Dix-Lakehurst, NJ and Anderson, SC for follow-on missions.
Photo by Staff Sgt. Joseph Truckley

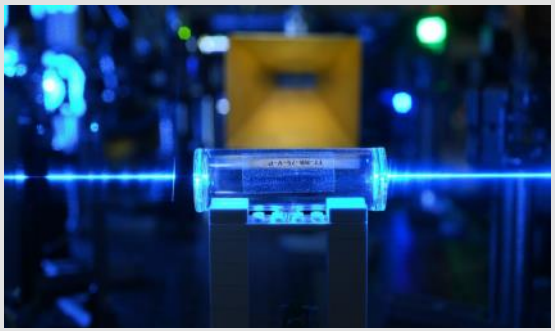
KNOW YOUR TECH

Army Scientists Create Innovative Sensor

US Army CCDC Army Research Laboratory Public Affairs

A quantum sensor could give Soldiers a way to detect communication signals over the entire radio frequency spectrum, from 0 to 100 GHz, said researchers from the Army. Such wide spectral coverage by a single antenna is impossible with a traditional receiver system, and would require multiple systems of individual antennas, amplifiers and other components.

In 2018, Army scientists were the first in the world to create a quantum receiver that uses highly excited, super-sensitive atoms--known as Rydberg atoms--to detect communications signals, said David Meyer, a scientist at the U.S. Army Combat Capabilities Development Command's Army Research Laboratory. The researchers calculated the receiver's channel capacity, or rate of data transmission, based on fundamental principles, and then achieved that performance experimentally in their lab--improving on other groups' results by orders of magnitude, Meyer said.



Atoms in a glass vapor cell are excited with laser beams to Rydberg states. US Army photo

"These new sensors can be very small and virtually undetectable, giving Soldiers a disruptive advantage," Meyer said. "Rydberg-atom based sensors have only recently been considered for general electric field sensing applications, including as a communications receiver. While Rydberg atoms are known to be broadly sensitive, a quantitative description of the sensitivity over the entire operational range has never been done."

To assess potential applications, Army scientists conducted an analysis of the Rydberg sensor's sensitivity to oscillating electric fields over an enormous range of frequencies--from 0 to 10^12 Hertz. The results show that the Rydberg sensor can reliably detect signals over the entire spectrum and compare favorably with other established electric field sensor technologies, such as electro-optic crystals and dipole antenna-coupled passive electronics.

"Quantum mechanics allows us to know the sensor calibration and ultimate performance to a very high degree, and it's identical for every sensor," Meyer said. "This result is an important step in determining how this system could be used in the field." This work supports the Army's modernization priorities in next-generation computer networks and assured position, navigation and timing, as it could potentially influence novel communications concepts or approaches to detection of RF signals for geolocation.

In the future, Army scientists will investigate methods to continue to improve the sensitivity to detect even weaker signals and expand detection protocols for more complicated waveforms.

MPEP provides participants new experiences, skills to bring home to the Signal Regiment

Nicholas Spinelli
Office Chief of Signal

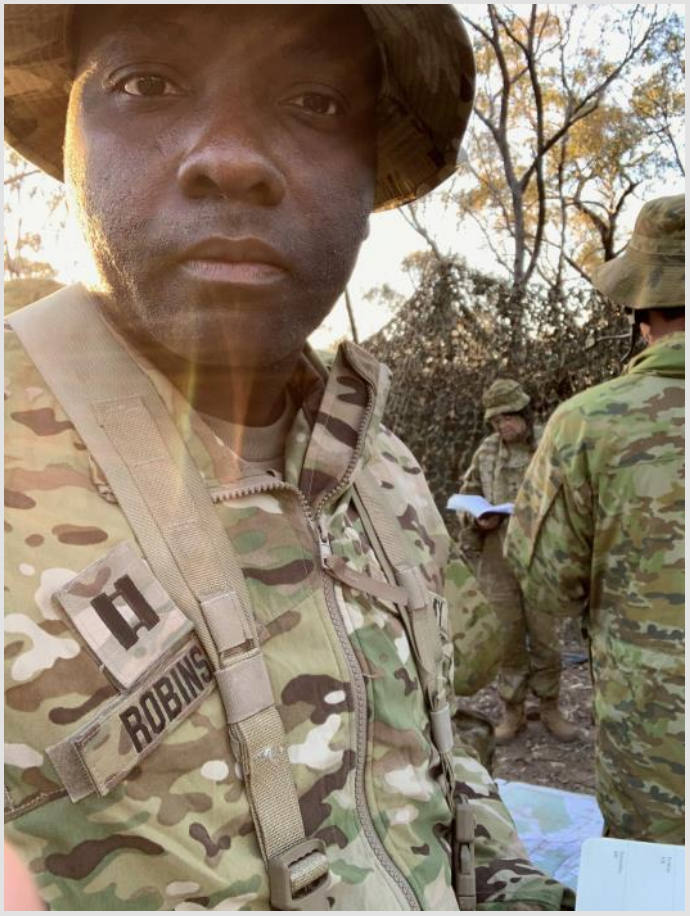
The Army's Military Personnel Exchange Program (MPEP) allows Soldiers who qualify to serve as embedded Officers in foreign nation Army forces. They can be stationed in one of three locations – the United Kingdom (UK), Germany, or Australia – working alongside their foreign counterparts and immersing themselves in the cultures. For the select few chosen for this opportunity, it provides the chance to see how the communication sector is managed in other areas of operation and potentially develop new skills and methodologies for their follow on assignments.

"MPEP primarily enhances the Army's ability to perform coalition operations with global partners, who are critical enablers for Army expeditionary forces," James Bussler, Force Integration specialist, said. "As such, officers selected for MPEP support the Department of Defense (DoD), Army, and regional combatant commanders' strategic goals. For example, an embedded officer could be assigned a position working on training operations, and helping to develop best practices for global forces."

While serving in an MPEP position, officers are not treated as guests or observers, but rather as fully part of the teams to which they are attached.

"While assigned in this position, I am integrated as a member of the Australian Defense Force and not just someone attached," said Cpt. Chris Robinson, MPEP Australia. "I am embedded with them, attend social functions, and even work as the daily duty officer from time to time. It is interesting being the only American in the room and, at times, being a source of continuity in joint doctrine or just a different point of view."

According to others in the program – such as Maj. Craig Starn, MPEP United Kingdom – that "different point of view," works both ways, and provides new ideas and ways of doing business that can potentially better the force when MPEP Officers return from their assignments abroad.



Cpt. Chris Robinson participated in field exercises with his Australian counterparts during his MPEP assignment.
Photo provided by Cpt. Chris Robinson

"To paraphrase a US Army senior leader, the British are very articulate with their words, whereas the US tends to be more articulate with our actions," Starn said. "Their approach has made the transition to agile methods of project management difficult, but has taught me too personally apply more scrutiny in my work and will make me a better steward of taxpayer money."

Ultimately, MPEP provides selected Officers a once in a lifetime opportunity to truly immerse themselves in a different culture while developing valuable skills that can be used as they further their Army careers.

"The military exchange program is an extremely valuable component to the success of the US military and enhancing Ally and Partner relationships," Maj. David Holbrooks, MPEP Germany said. "It is a highly rewarding experience which also provides the means to learn from another nation, and it has been an honor representing the United States Army, the USAREUR, and the Cyber Center of Excellence."

Maj. David Holbrooks and his foreign military counterparts visited one of the German Command Information Service Battalions during his MPEP assignment.
Photo provided by Maj. David Holbrooks

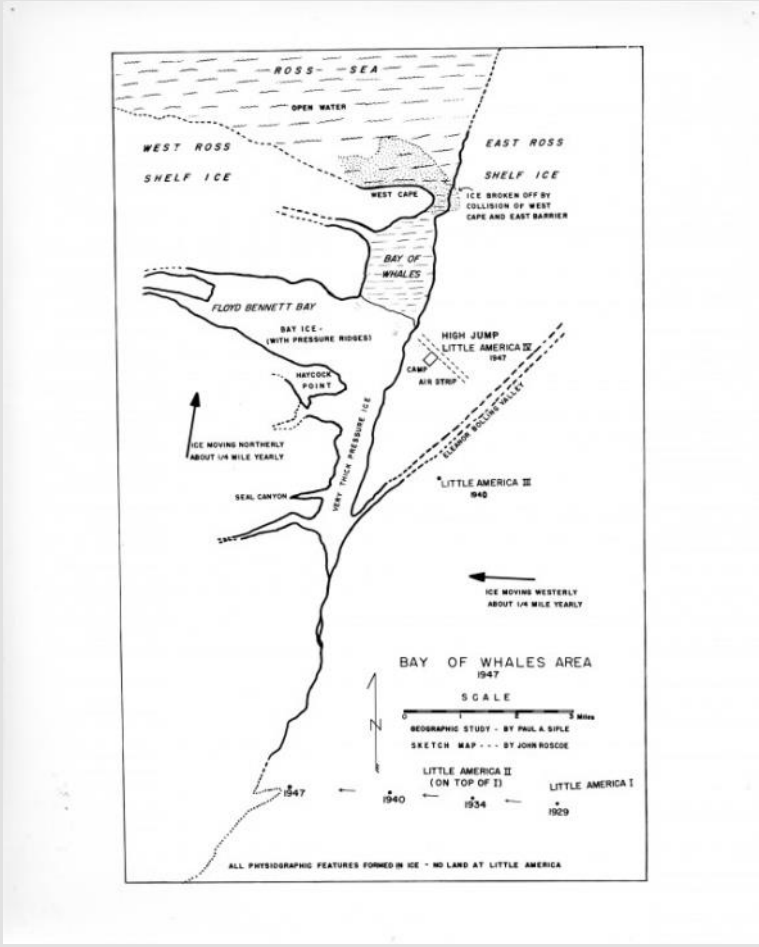
Antarctic Exploration in Little America

Susan Thompson
US Army CECOM Command Historian

It was U.S. Navy Operation Highjump in 1947 that brought Amory "Bud" Waite of the U.S. Army Electronic Research and Development Labs at Fort Monmouth, New Jersey, to the Little America Antarctica settlement. Waite was an Army observer focused on communications, photography, and electronic and power supply equipment. He was also an Antarctic exploration veteran, having served as the Ice Party radio operator and electrician at Little America in 1934.

As part of Operation Deep Freeze, the Signal Corps established an Antarctic research team at Camp Coldbottom, the signal test site at Little America V. In 1955, experiments and tests at the camp focused on wave propagation, meteorology and radio equipment. Waite coordinated the Antarctic research team for the signal engineering labs, and later traveled to the Antarctic at least nine times. His last trip took place in 1962, where he tested a radio-sounding method he developed for measuring ice thickness. He later went on to visit the South Pole for the first time.

In 1964, John J. Kelly and Sgt. First Class B.R. Caldwell represented the Fort Monmouth Electronic Development and Research Labs in the Antarctic. Caldwell was believed to be the first and only signal corps Soldier to ever travel to the South Pole station, 90 degrees south. The South Pole trek was made to install wind chill and atmospheric electricity measuring equipment for Fort Monmouth, with summer temperatures nearing 35 degrees below zero. These trips continued the signal corps' long-term focus on meteorology and communications in extreme climates, and led to many future innovations that continue today.



US Army photo

143RD SIGNAL BATTALION
3RD ARMOURED DIVISION
REUNION

October 10, 2020

Army Community Service Family
Outreach Center
33512 Rice Drive
Fort Gordon, Georgia 30905

4 PM to 8 PM

To RSVP or for more information, please contact
Command Sgt. Maj. (ret.)
Clark Dimery, Sr.
at (706)-267-0496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